

TRANSMITTAL OF APPEAL BRIEF (Large Entity)Docket No.
ITL.0268USIn Re Application Of: **Jason T. Cassezza**Serial No.
09/409,330Filing Date
September 30, 1999Examiner
C. dela TorreGroup Art Unit
2174Invention: **CONTROLLING AUDIO VOLUME IN PROCESSOR-BASED SYSTEMS****RECEIVED**

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TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on May 1, 2002.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jason T. Cassezza

Serial No.: 09/409,330

Filed: September 30, 1999

For: CONTROLLING AUDIO VOLUME
IN PROCESSOR-BASED SYSTEMS

§ Group Art Unit: 2174

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Examiner: C. dela Torre

Atty. Dkt. No.: ITL.0268US
P7591Board of Patent Appeals & Interferences
Commissioner for Patents
Washington, D.C. 20231**APPEAL BRIEF**

Sir:

Applicant respectfully appeals from the final rejection mailed March 21, 2002.

I. REAL PARTY IN INTEREST

The real party in interest is the assignee Intel Corporation.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

Claims 1-26 are rejected. Each rejection is appealed.

IV. STATUS OF AMENDMENTS

All amendments have been entered.

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I hereby certify under 37 CFR 1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated above and is addressed to the Board of Patent Appeals & Interferences, Commissioner for Patents, Washington, DC 20231.
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V. SUMMARY OF THE INVENTION

A processor-based system 10, shown in Fig. 1, may include a processor-based unit 12, a television receiver 14, and a remote control unit (RCU) 16. The RCU 16, which may be battery powered, may control the operation of the processor-based unit 12 and the television receiver 14 by way of airwave transceivers 20 and 22 on the television receiver 14 and the processor-based unit 12 respectively. For example, in one embodiment of the present invention, the RCU 16 may include a transceiver 25 which communicates with the transceivers 20 and 22 through airwave broadcasts, such as infrared, radiowave, or ultrasonic signals. In this way, the RCU 16 may remotely control each of the processor-based unit 12 and the television receiver 14.

The system 10 is illustrated as a set top computer system in accordance with one embodiment of the present invention. Conventionally, a set top computer system uses a unit 12 which sits atop a television receiver 14 and may be controlled by a remote control unit 16. However, the present invention is not in any way limited to this particular embodiment and may be applied to a variety of processor-based systems including desktop computers, laptop computers, and processor-based appliances.

The RCU 16 may include a microphone 24, cursor controls 26 and a numeric keypad 28. The numeric keypad 28 allows the user to make input commands such as channel selection commands or other input commands. The cursor controls 26 allow conventional mouse style commands. For example, the cursor controls 26 may allow the user to move through a variety of entries on an electronic programming guide, selecting a particular entry that is of interest. See specification at page 3, line 15, through page 4, line 19.

A pushbutton 30 may provide a control signal which automatically causes a graphical user interface to be displayed on the screen 18 of the television receiver 14. The graphical user interface 32, shown in Fig. 2, may include a graphical slider 34. A graphical volume tolerance range indicator having a high level 36 and a low level 38 are also indicated. A graphical decibel indicator 40 may be provided as well. The user can set the high and low levels of a volume tolerance range by simply moving the high and low slider indicator 34 using mouse-like controls via the cursor controls 26. In this way, the user can reset a desired high and low volume level and the system may automatically implement those commands, in one embodiment of the present invention.

Software 42 for enabling the listener to set the volume levels and the tolerance range may begin by detecting a tolerance input request as indicated in diamond 44 in Fig. 3. The input request may be the result of the user's operation of the pushbutton 30, in one embodiment of the present invention.

Upon receipt of the request, the graphical user interface 32 (Fig. 2) is displayed as indicated in block 46. The user is prompted to indicate a maximum volume. This may be done, for example, by highlighting the slider image 36. The system may then automatically generate a series of time spaced tones of increasing volume, as indicated in block 50. The user may provide an input command to indicate the volume level which the user desires not to exceed. This input command may be provided, for example, using the RCU 16, by re-operating the pushbutton 30 or by using the cursor controls 26 to operate the mouse select feature (corresponding to the left mouse button). As tones progressively become louder, the slider image 36 moves upwardly. See specification at page 4, line 20, through page 6, line 2.

When the user input signal is detected, as indicated in diamond 52, the high volume level is stored as indicated in block 54. In other words, the system stores that volume level that most closely corresponds to the volume of the tone produced when the select signal is received, for example from the pushbutton 30.

Thereafter, the user may be prompted to indicate a minimum volume level as indicated in block 56. A series of time spaced tones of decreasing volume, starting at the high volume level just set, are generated as indicated in block 58. The slider image 38 moves downwardly as the tones decrease in volume. When a user select signal is detected, as indicated in diamond 60, the low volume level value is stored, as indicated in block 62. The recorded low volume level is the one that most closely corresponds to the volume of the tone produced when a select signal is received.

Referring next to Fig. 4, software 64 for controlling the volume level of audio received by the processor-based system begins by receiving audio information as indicated in block 66. The audio information may be received from a variety of sources including the Internet, television broadcasts over the airwaves, satellite or cable and audio broadcasts over airwaves or by satellite, as examples. See specification at page 6, line 3, through page 6, line 26.

The system then obtains an indicia of the volume level (block 68). This indicia can be obtained in a number of different ways. In one embodiment of the present invention, the RCU 16 includes a microphone 24. The microphone 24 may receive the audio information generated by the television receiver 14 or the processor-based unit 12. Since the RCU 16 is usually maintained in close association with the user, the RCU 16 microphone 24 provides a good indicia of how loud the information is when it reaches the user. This loudness information may then be retransmitted back to the processor-based unit 12 for operation with the software 64.

Alternatively, indicia may be obtained from the received audio information itself. This information may then be analyzed within the processor-based unit 12.

The indicia is then compared to the high volume level previously set by the user, as indicated in block 70. Thereafter, the indicia is compared to the preset low volume level, as indicated in block 72. A check at diamond 74 determines whether the currently detected volume level is within the user's tolerance range. If so, the flow ends. Otherwise the volume is adjusted.

For example, if the volume is below the user's tolerance range, the volume may be automatically increased in decibels and conversely if the volume is above the user's tolerance range the volume may be automatically decreased. In other words, the volume level is automatically adjusted toward a pre-set high or low level. In some embodiments of the present invention, instead of having a fixed, set limit, the volume may be progressively increased or decreased around the lower and upper levels, respectively. See specification at page 7, line 1, through page 8, line 6.

That is, as the volume approaches the user's preset volume level, it may be progressively decreased at the high level and increased at the low level. As a result, the user may not notice an abrupt volume change at volume levels near the high and low levels. As the volume attempts to exceed the pre-set level, the volume may be damped or reduced toward the pre-set high level. Similarly, the volume may be progressively increased toward the low volume level when the volume is below the low level.

VI. ISSUES

A. Is Claim 1 Anticipated by Lee?

VII. GROUPING OF THE CLAIMS

The claims may be grouped with claim 1.

VIII. ARGUMENT

A. Is Claim 1 Anticipated by Lee?

Claim 1 was rejected under Section 102 over Lee. The Examiner asserts that Lee teaches “obtaining an indicia of the volume level of audio information received by said system.” It is apparently agreed by the Examiner that this claim limitation means that the indicia must be received with the signal including audio information. Thus, the signal contains information that provides audio level data for the received audio information.

The cited Lee reference merely takes user input commands and converts them to increase or decrease audio volume from an undeterminable initial volume level. Necessarily, Lee never knows what was the preset or initial audio level associated with any received audio information. Instead, Lee is simply a system where the user can be playing audio and can adjust the volume of that audio up or down as the user desires. Thus, Lee never obtains an indicia of what was the volume level of the audio information received by the system. That level is unknown to the system that merely increases or decreases the volume level received, as directed by the user.

The Examiner relies on Figure 2 and, particularly, blocks 11, 12, and 13. However, it is clear from column 2 of the specification that in block 11 the software merely accepts a user “key-input signal” and determines whether it is an “up-signal” or “down-signal.” See column 2, lines 31-37. Thus, it is clear that step 11 merely involves receiving a user command without “obtaining an indicia of the volume level of audio information received by said system.” All that the system receives is the user command to increase or decrease the volume; the system does not receive any information about what is the base volume level of a received signal.

The final Office Action also points to blocks 12 and 13. After block 11, once the input signal from the user is determined to be an up-signal, the level of the set control signal is

increased and the graphical bars, as displayed on the screen, are also increased through a bar increment step 12. See column 2, lines 37-40. Again, it is clear that all that is being done is to increase the volume level as commanded by the user and to display a bar display of the volume level to correspond with the user's input. Again, there is no "obtaining an indicia of the volume level of the audio information received by said system."

Lee goes on to enter a maximum-discrimination step 13 "for checking whether the number of bars increased by the bar-increment step 12 is a maximum or not." See column 2, lines 40-47. In other words, the user may simply increase the volume level to a maximum setting, whatever that may be. The system increases the volume by a maximum amount and displays the maximum volume setting bar data on the display screen. This maximum has nothing to do with whatever was the original input signal volume level.

The input volume is simply increased by the maximum amount without any information about what the volume level of the information was that was received.

The system must determine whether the user is attempting to increase the volume level by more than the maximum increased amount in order to control the display that indicates, by a bar graph, where the user stands with respect to the available amount of increase of volume. Once the user exceeds, or attempts to exceed the maximum, there is no longer a bar graph that can be displayed and, therefore, the maximum amount of increase is apparently controlled.

Lee never knows what the original volume level was. All Lee knows is whether the user wishes to increase by a certain amount or decrease by a certain amount. The system simply takes whatever the user commands it receives and increases the volume by that amount or decreases it by that amount. There is one exception; if the user attempts to increase by an amount that exceeds the maximum or to decrease by an amount that exceeds the minimum, the system simply

blocks such excursions. But there is no indication whatsoever, that the maximum corresponds to any given volume level. Instead, it appears that all Lee is doing is increasing by up to a maximum amount or decreasing down to a minimum amount. There is no knowledge on the system of what was the original incoming volume level. If the incoming volume level is relatively high, the maximum may be relatively high. If the incoming volume is relatively low, then the maximum value is lower than the maximum achieved with a lower original volume setting for the received signal. There is absolutely no indication at lines 35-37, or anywhere else in Lee, that Lee obtains any information about the real volume level of the incoming audio signal. Instead, it is apparent that all Lee does is receive commands from the user and responds appropriately to increase or decrease whatever volume level is received.

This explanation is further supported in column 3 of Lee. There it is explained that if an up-signal is received continuously, the bar graph is continuously incremented. But if the value of the level becomes a maximum by continuous inputs of the up-key, the maximum discrimination step stops the incrementing of the PWM output and the level is fixed to the 64 level. See column 3, lines 13-16. The 64 level is clearly the amount of up-signals that can be received. In other words, up to 64 up levels or steps may be received, because the display only displays so many bar graph symbols for the maximum level. The maximum level though is the maximum level for a given input signal volume, not necessarily the maximum for the system. For example, it is explained that 32 bars on the bar graph is the maximum up-signal. But the 32 bars are 32 increments of up-signal. The final volume depends on what was the volume level of the input signal. Thus, there is no indication that Lee ever controls the absolute volume of the signal. Instead, all Lee does is control the maximum amount that the signal can be increased or decreased.

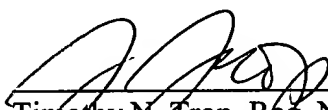
In view of these remarks, the rejection of the claims should be reversed.

IX. CONCLUSION

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: 5/30/02



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